14

CLAIMS

1.   A method of allocating switch requests within a packet switch, the method comprising the steps of

(a)   generating switch request data for each input port indicative of the output ports to which data packets are to be transmitted;

(b)   processing the switch request data for each input port to generate request data for each input port-output port pairing; and

(d)   generating an allocation plan by sorting the request data R relating to each of the input/output pairs in terms of their queue length, and

(e)   for each input/output pair, considered in the sorted order, allocating as many of the requests in the queue as can be accommodated in the remaining time slots.

2.   A method of packet switching wherein the packets are switched on the basis of the allocated routing, and to a packet switch in which the input port-output port routing is allocated in accordance with claim 1, and packets are switched from an input port to a specified output port in accordance with the allocated routing.

3.   A method according to claim 1 or 2, in which unallocated switch requests are reserved for use in the next phase of switch request allocation, or abandoned if they have exceeded a predetermined expiry time.

4.   A method according to claim 1, 2 or 3, comprising a preliminary stage in which the number of requests for each input or output port is reduced by a factor such that the number of requests relating to that port is no greater than the number of available time slots.

5.   A method according to claim 1, 2 or 3, comprising a preliminary stage in which the number of requests in respect of each input/output pair are reduced by a single common factor such that the number of requests relating to all ports is no greater than the number of available time slots.

15

6.   A method of packet switching wherein the input port-output port routing is allocated according to the method of any preceding claim and the packets are switched on the basis of the allocated routing.

5   7.   A packet switch in which the input port-output port routing is allocated in accordance with the method of any of claims 1 to 6.

8.   A packet switch according to claim 7, wherein packets are switched from an input port to a specified output port in accordance with the allocated routing.

10